

## Generating Electric Energy (12.5)

Type	Advantage	Disadvantage	interesting
Fossil fuels -coal, oil, n.gas	<ul style="list-style-type: none"> <li>• Easy to get</li> <li>- convenient</li> <li>• Good source of energy (works well)</li> </ul>	<ul style="list-style-type: none"> <li>• limited (non-renew.)</li> <li>• hurts environment (CO<sub>2</sub>, soot)</li> <li>• causes global warming</li> </ul>	<ul style="list-style-type: none"> <li>• 60-200 yrs.</li> <li>• millions yrs. Old.</li> <li>• plants compressed</li> </ul>
Solar	<ul style="list-style-type: none"> <li>• renewable</li> <li>• clean, quiet</li> <li>• eco-friendly</li> </ul>	<ul style="list-style-type: none"> <li>• costly to set up.</li> <li>• take up much space</li> <li>• intermittent</li> </ul>	<ul style="list-style-type: none"> <li>• mirrors to concentrate</li> <li>• developed by NASA</li> </ul>
Wind	<ul style="list-style-type: none"> <li>• renewable</li> <li>• sig. amount of energy</li> <li>• clean/quiet?</li> </ul>	<ul style="list-style-type: none"> <li>• can't be stored</li> <li>• intermittent</li> <li>• need a LOT of turbines</li> </ul>	<ul style="list-style-type: none"> <li>• very old method</li> <li>• horizontal &amp; vertical</li> </ul>
BioEnergy	<ul style="list-style-type: none"> <li>• uses common materials</li> <li>• helps keep forests healthy</li> <li>• less waste in forestry</li> <li>• inexpensive</li> </ul>	<ul style="list-style-type: none"> <li>• air pollution</li> <li>• can't be our only energy source</li> <li>• 15% world energy source</li> </ul>	<ul style="list-style-type: none"> <li>• ethanol (corn) mixed with gasoline.</li> <li>• very old source</li> </ul>
Hydro-electric power	<ul style="list-style-type: none"> <li>• can use on demand – instant</li> <li>• renewable</li> <li>• clean</li> </ul>	<ul style="list-style-type: none"> <li>• droughts can occur</li> <li>• river flow affected &amp; wildlife (fish) affected</li> <li>• most large sources are used</li> </ul>	<ul style="list-style-type: none"> <li>• 24% worlds energy</li> <li>• oldest form of producing electricity</li> </ul>
Geothermal	<ul style="list-style-type: none"> <li>• renewable</li> <li>• clean</li> </ul>	<ul style="list-style-type: none"> <li>• costly to build</li> <li>• this heat not found everywhere.</li> </ul>	<ul style="list-style-type: none"> <li>• heats houses etc.</li> <li>• heat → steam to heat fish farms</li> </ul>
Hydrogen	<ul style="list-style-type: none"> <li>• clean – water is 'waste'</li> <li>• less pollution</li> <li>• renewable</li> </ul>	<ul style="list-style-type: none"> <li>• H doesn't exist naturally</li> <li>• need to burn fossil fuels to purify</li> <li>• flammable</li> </ul>	<ul style="list-style-type: none"> <li>• H is most abundant element</li> </ul>

Ontario's Energy Future – pg. 527

Sketch & label the pie graph on this page. →

Calculate and write down the % energy that is generated using non-renewable resources.

This needs to change in the future!



